

GRULEANU, N.

Role of financial and accounting statistical reporting in furthering realization of the production plan in enterprises; an aid to guiding cadres in our factories. p. 3.

The forman, organizer of production; a conference organized by the periodical CONSTRUCTORUL and by the regional trade-union committee of constructors in Galatz. p. 4.

Vol. 7, no. 284, June 1955  
CONSTRUCTORUL  
Bucuresti, Rumania

Source: East European Accession List. Library of Congress  
Vol. 5, No. 8, August 1956

BARNAVELI, T.I.; BIRILAEV, I.I.; KARAPLAEV, I.I.; KAZAROV, A.K.; KAZAROV, A.Ya.; KOROTK, R.V.; KHAIDEYEV, I.V.

Properties of the penetrating component of extensive air showers at a depth of 200 meter water equivalent. Izv. AN SSSR. Ser. fiz. 23 no.11:1894-1895 N '64. (MIRA 17:12)

1. Institut fiziki AN GruzSSR.

ACCESSION NR: AP4042889

S/0251/64/035/001/0059/0066

AUTHOR: Barnaveli, T. T., Bibilashvili, M. F., Dzhevriashvili, A. K., Grube-lashvili, G. A., Kazarov, R. Ye., Kuridze, R. V. Khaldeyeva, I. V.,

TITLE: Investigation of the spatial distribution of mu-mesons in extensive atmospheric showers at a depth of 200 meters (water equivalent)

SOURCE: AN GruzSSR. Soobshcheniya, v. 35, no. 1, 1964, 59-66

TOPIC TAGS: meson, mu meson, atmospheric shower, cosmic ray, nuclear physics, atmospheric physics, meson spatial distribution

ABSTRACT: A study of the spatial distribution of the penetrating component of extensive atmospheric showers has been made in the underground laboratory of the Institut fiziki Akademii nauk Gruzinskoy SSR (Institute of Physics of the Academy of Sciences of the Georgian SSR). The selected geometry of the experiment ensured measurement of the density of the mu-meson flux to a distance of 80-100 m from the shower axis. An attempt was made to compute the total quantity of penetrating particles with a minimum energy of 40 Bev and their contribution to the energy balance of the shower and to detect nonuniformities in the mu-meson flux. Determination of the mu-meson component characteristics at a

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ACCESSION NR: AP4042889

depth of 200 m (water equivalent) required determination of the direction of arrival of the axis of the shower because the distance between the mu-meson detectors underground and the axis of the shower recorded at the surface is dependent on the angle of inclination of the axis. Arrangement of the underground apparatus is shown in Fig. 1 of the Enclosure. Scintillation apparatus was used for detecting showers and the inclination of their axes. A pulse from the coincidence circuit of this apparatus triggers both the OK-19 oscillograph and a blocking generator controlling the operation of two modulators using TGI-1-130/10 thyratrons, one of which triggers the pulse hodoscopes situated on the surface around the building, as shown in Fig. 2 of the Enclosure; another thyatron controls the underground mu-meson detectors. The underground part of the apparatus consists of a system of eight hodoscopic detectors, each separated by lead blocks 10 cm thick. Each detector has an area of 0.5 m<sup>2</sup> and the total area of the underground detectors is 4 m<sup>2</sup>; each detector has a triple-coincidence circuit. During the 1,920 hours of operation the underground detectors were triggered 415 times. The mean dimension of showers (with respect to quantity of particles) was  $6 \times 10^5$ . Densities are given in a table. An expression is given for the distribution, and the results are compared with similar work done at the NIYaF MGU. Orig. art. has: 3 formulas, 6 figures and 1 table.

ASSOCIATION: Institut fiziki Akademii nauk Gruzinskoy SSR, Tbilisi (Physics Institute, Academy of Sciences of the Georgian SSR)

Card 2/6

ACCESSION NR: AP4042889

SUBMITTED: 20Nov63

ENCL: 02

SUB CODE: NP, ES

NO REF SOV: 003

OTHER: 000

Card 3/5

ACCESSION NR: AP4042889

Enclosure 01

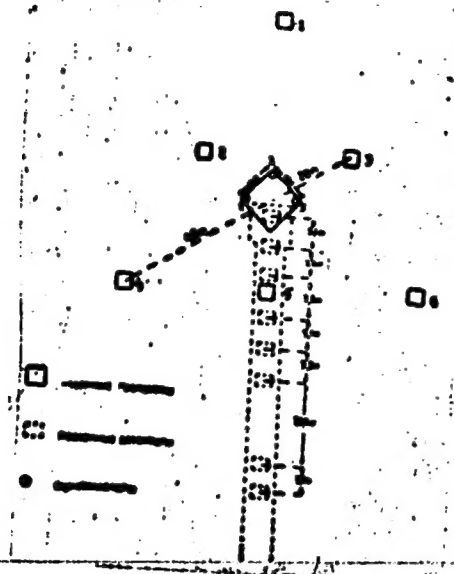


Fig. 1. Geometry of the apparatus. 1 - surface hodoscopes; 2 - underground detectors; 3 - scintillators

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ACCESSION NR: AP4042889

Enclosure 02

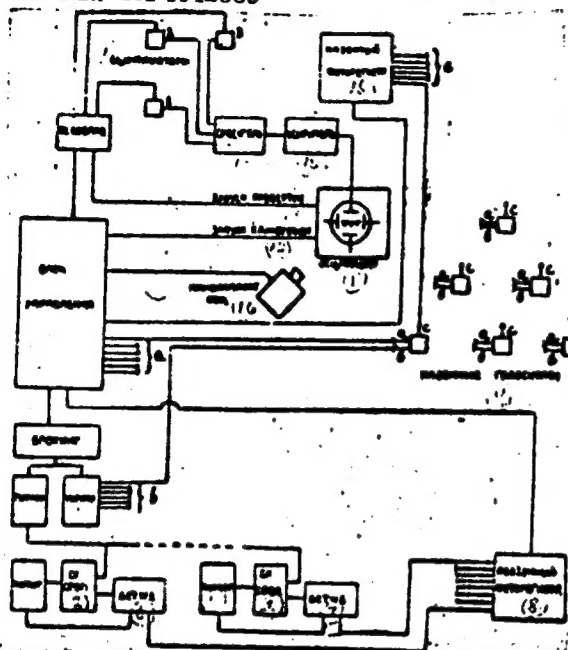


Fig. 2. Block diagram of the apparatus. 1 - scintillators; 2 - coincidence circuit; 3 - control unit; 4 - blocking generator; 5 - thyatrons; 6 - detector #1; 7 - detector #8; 8 - underground photorecorder; 9 - surface hodoscopes; 10 - oscillograph movie camera; 11 - oscillograph; 12 - triggering for calibration; 13 - triggering for scanning; 14 - mixer; 15 - amplifier; 16 - surface photorecorder.

1. GRUBEN', T. I.
2. USSR (600)
4. Electric Power Plants
7. Method of normalizing fuel and lubricant consumption of mobile power plants. Les.prom. 13, no. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

GRUBER, Arnost

Annual report on activities of department of public health. Cesk.  
zdravot. 5 no.12:696-698 Dec 57.

1. Vedouci organisacne metodického oddeleni KUM v Brne.  
(PUBLIC HEALTH,  
reports (Cz))

PROBKA, J. Mudr.; SEKAL, Antonin, Inz.

The work of a medical statistician. Cesk. zdravot. 6 no.5:220-223  
May 58.

1. Organizačne metodické oddelení KUM Brno.  
(STATISTICS  
med. statistician in Czech. (Cz))

GRUBER, A.; PARIZEK, Z.

New zoning of the health service in Brno District. p. 294.

CEBKOSLOVENSKE ZDRAVOTNICTVI. Praha, Czechoslovakia. Vol. 7, no. 5, July  
(i.e. June) 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 9, no. 1, January 1960.

Uncl.

GRUBER, A., MUDr.; PARIZEK, Z. MUDr.

A new regional approach to the health services in the Brno region.  
Cesk. zdravot. 7 no.6:294-298 July 59

1. Organizacne metodicke oddeleni Krajskeho ustavy narodniho zdravi  
v Brno.

(PUBLIC HEALTH)

NOVAK, Vaclav; GRUBER, Antonin

The vascular pattern of the public symphysis. Cesk. morf. 10 no.3:  
289-297 '62.

1. Anatomicky ustav fakulty vseobecneho lekarstvi UK v Pizni,  
prednosta prof. MUDr. Jaroslav Kos.  
(PUBLIC SYMPHASIS blood supply) (AGING physiology)

GRUBER, B.

Study on the fundamentals of geometry.

P. 1, (Casopis Pro Pestovani Matematiky) Vol. 82, no. 1, Mar. 1957  
Praha, Czechoslovakia

SO: Monthly Index of East European Acessions (EEAI) Vol. 6, No. 11 November 1957

06625

CZECH/37-59-5-1/13

**AUTHOR:** Gruber, Boris

**TITLE:** Basic Concepts of Dislocation Theory

**PERIODICAL:** Československý časopis pro fysiku, 1959, Nr 5,  
pp 455 - 462

**ABSTRACT:** This work differs from the well-known paper by Frank (Ref 1) in several respects. It limits itself entirely to geometrical aspects and deals with the concept of the dislocation only. The dislocation is rigorously introduced in a manner accepted in mathematical treatises and some theorems are proved. There are 4 figures and 3 references, of which 2 are English and 1 German.

**ASSOCIATION:** Fysikální ústav Karlovy university, Praha  
(Department of Physics, Charles University, Prague)

**SUBMITTED:** March 26, 1959

Card 1/1

Distr: 4E2o

Fundamental concepts of the theory of dislocations.  
Boris Gruber (Karlova Univ., Prague). Czechoslov. J.  
Phys. 9, 701-9 (1959) (in English).—The author reviews the  
fundamental concepts of the theory of dislocations and  
proves some theorems (Frank, CA 46, 314a).

A. Kremheller

3  
1-nje (30)

GRUBER, B.I.; MARKOV, V.M.; NEKRASOV, A.I.

Boost charge circuit for auxiliary charge batteries of streetcars.  
Rats. predl. na gor. elektrotransp. no.9:4-5 '64.

(MIRA 18:1)

1. Tramvayno-trolleybusnoye upravleniye Chelyabinska.

OVARI, Antal; LATINAK, Istvan; GRUBER, Imre

Society news. Koh lap 96 no.4:190-191 Ap '63.

1. "Kohasgati Lapok" szerkeszto bizottsagi tagja (for Ovari).

ZHDANOVA, L.G.; GRUBER, I.M.

Obtaining monostratal cellular cultures of human embryonic  
intestinal tissue. Zhur.mikrobiol., epid. i immun. 42  
no.9:71-75 S '65. (MIRA 18:12)

1. Moskovskiy institut vaktsin i syvorotok imeni Mechnikova.  
Submitted June 20, 1964.



7

CA

formation of nitroguanidine salts and their analytical  
evaluation. Arnolt Okla. and Jit Cimber (Masaryk Univ.,  
Brno, Czech.). *Chem. Listy* 49, 40-51 (1951). Nitro-  
guanidine and its Ni, Cu, and Ag salts have been prepd. and  
found unsuitable for analytical purposes. The Ag salt is ex-  
clusive. M. Tindlický

1451

GRUBER, J.

"Blade Section Design in Axial Hydraulic Machines" p. 355 (Acta Technika,  
Vol. 5, No. 3, 1952, Budapest)

SO: Monthly List of East European Vol. 3, No. 3 1954  
~~Russian~~ Accessions, Library of Congress, March 1954, Uncl.

GRUBER, J.

On the Problem of Judging Blade  
Sections of Axial Hydraulic  
Machines (In English)

J. Gruber

Acta techn. hung.

7, 19-27

1953

Hungary

The effect is discussed of change of the characteristic dimensions of a blade profile on the V curve obtained by plotting the ratio  $W/W_a$ , (velocity along the periphery of the blade section, to that of the undisturbed flow), against the lift coefficient. This curve provides a fairly easy means of determining the blade section profiles giving maximum lift coefficient.

9/13/53

GRUBER, J.

2255. Gruber, J., On the observation of streamlines in radial flow impellers. *Arch. Hung. Budapest* 7, 1-2, 29-41, 1953. Smoke introduced at various points into inlet of radial fan and viewed through transparent case with stroboscopic arrangement provided qualitative flow information. Analysis of photographs and direct observation aid understanding about flow separation from blades and regions of most rapid smoke diffusion. H. G. Folsom, USA.

GRUBER, J.

Let us not forget workers of machine repair shops. p. 144.  
Available and wanted machinery and parts. p. (3) of cover.

Vol. 3, no. 4, April 1954 (Mechanizace)  
INZENYRSKI STAVEY  
Praha, Czechoslovakia

So: Eastern European Accession Vol. 5 No. 4 April 1956

GRUBER, J.

"Measurement of Pressure Distribution on Blades of Centrifugal Fan Impellers." In English, p. 37, Budapest, Vol. 9, no. 1/2, 1954.

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress

GRUBER, J.

GRUBER, J. Examination of flow to radial rotating wheels. n. 1.

Vol. 13, no. 1/4, 1954, Budapest, Hungary KOZMUTNYET

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 3,  
March, 1956

RUSSE, J.; RUSSE, A.

Construction coatings. p. 335.

Vol. 35, no. 11, Nov. 1955

PALIVA

Praha, Czechoslovakia

Source: East European Accession List. Library of Congress  
Vol. 5, No. 8, August 1956

Gruber, J.

✓260. Gruber, J., Approximate determination of the velocity field of a vortex row with a gap, (in Hungarian). Magyar Tud. Akad. Oszt. Kézi. 18, 1/4, 187-192, 1956.

The induced effects of a closely spaced blade cascade on a single blade are calculated by substituting vortex rows for all adjacent blades and computing (with certain approximations) their effect along the chord of the blade in question.

T. P. Torda, USA

VMM  
RHP

Handwritten notes and signatures in the top right corner, including "RHP" and "RHP" with a checkmark.

GRUBER, J.

Design of rotor blades with retro-curved blades, In German.

P. 43. (PERIODICA POLYTECHNICA, ENGINEERING) (Budapest, Hungary) Vol. 1, No. 1, 1957

SO: Monthly Index of East European Accession (EEAI) LC Vol. 7, No. 5, 1958

GRUBER, J.

TECHNOLOGY

PERIODICA POLYTECHNICA. ENGINEERING. (Budapesti Muszaki Egyetem) Budapest.

GRUBER, J. Temperature distribution on radiant heating surfaces, in German,  
p. 51.

Vol. 2, no. 2, 1958.

Monthly List of East European Accession (EEAI) LC Vol. 8, No. 3.  
March 1959, Unclass.

GRUBER, J.

"Coating materials for cans." P. 155.

PRUMYSL POTRAVIN. (Ministerstvo potravinarskeho prumyslu). Praha,  
Czechoslovakia, Vol. 10, No. 3, 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8,  
August 1959.  
Uncla.

SZADECZKY-KARDOSS, Elemer; ZSEBOK, Zoltan, dr.; RUSZNYAK, Istvan, dr.;  
 ANTALFFY, Gyorgy, dr.; BIHARI, Otto, dr.; CHOLNOKY, Laszlo, dr.;  
GRUBER, Jozsef, dr.; HAY, Laszlo, dr.; KESZTYUS, Lorand, dr.;  
 MAGYARI, Andras, dr.; ORTUTATY, Gyula, dr.; PERENYI, Imre, dr.;  
 PETRI, Gabor, dr.; POLINSZKY, Karoly, dr.; RAPCSAK, Andras;  
 TORO, Imre, dr.; ZAMBO, Janos, dr.

Peace to the world! An appeal by the Committee on Science of  
 the National Peace Council. Term tud kozl 6 no.6:241 Je  
 '62.

1. Orszagos Beketanacs Tudomanyos Bizottsaganak elinok (for Szadeczky-Kardoss).
2. Orszagos Beketanacs Tudomanyos Bizottsaganak titkara (for Zsebok).
3. Magyar Tudomanyos Akademia elnoka (for Rusznyak).
4. Szegedi Tudomanyegyetem rektora (for Antalffy).
5. Pecs Tudomanyegyetem allamjogi karanak dekanja (for Bihari).
6. Pecs Orvostudomanyi Egyetem rektora (for Cholnoky).
7. Budapesti Muszaki Egyetem rektora (for Gruber).
8. Marx Karoly Kozgazdasagtudomanyi Egyetem rektora, Budapest (for Hay).
9. Kossuth Lajos Tudomanyegyetem rektora, Debrecen (for Kesztyus).
10. Agrartudomanyi Egyetem rektora (for Magyar).
11. Eotvos Lorand Tudomanyegyetem rektora (for Ortutay).
12. Epitoipari es Kozlekedesi Muszaki Egyetem rektora (for Perenyi).
13. Szegedi Orvostudomanyi Egyetem rektora (for Petri).
14. Veszpremi Vegyipari Egyetem dekanja (for Polinszky).

(To be continued)

GRUBER, Jozsef, dr.; PRESZLER, Laszlo

Application of electrofilters in air technology. Munkavedelem 9  
no. 10/12:5-9 '63.

1. Editorial board member, "Munkavedelem." (for Preszler).

GRUBER, K.

Codification of the names of medicinal plants. 2. ~~Si-~~  
~~nowicki, R. Koler, L. Króczyński, R. Wagner, K.~~  
~~Gruber, and R. Tyralo (Inst. Pharm., Warsaw). Pharm.~~  
~~Prace, No. 5, 123-30 (1964).—Discussion. L. J. P.~~

GRUBER, K.

SYNOWIEDZKI, A.; KOJER, R.; KROWCZYNSKI, L.; WAGNER, R.; GRUBER, K.;  
TYRAJO, E.

Studies on stability of hemopoietic factors (vitamin B<sub>12</sub>) in  
concentrate of liver extract and in the presence of potassium  
cyanide and cobalt chloride. Farm. polska 10 no.5:130-132 May '54.

1. Z Instytut Farmaceutycznego w Warszawie. Dyrektor mgr W.Guzulka.

(VITAMIN B<sub>12</sub>,

stability in liver extract in presence of potassium  
cyanide & cobalt chloride)

(LIVER EXTRACTS,

stability of vitamin B<sub>12</sub> in presence of potassium  
cyanide & cobalt chloride)

(CYANIDES, effects,

potassium cyanide, on stability of vitamin B<sub>12</sub> in  
liver extract)

(COBALT,

chloride, eff. on stability of vitamin B<sub>12</sub> in liver  
extract)

SYNOWIEDZKI, Z.; KOJER, R.; KROWCZYNSKI, L.; WAGNER, R.; GRUBER, K.;  
TYBALO, R.

Stability of hemopoietic factors in concentrated liver extracts.  
Acta Poloniae pharm. 11 no.2:137-145 1954.

1. Z Instytutu Farmaceutycznego w Warszawie. Dyrektor: mgr W.Guzulka.  
(LIVER EXTRACTS,  
\*stability of hemopoietic factors in)

KAZO, Bela; GRUBER, Lajos

Soil erosion research by means of isotopes. Agrochem talajtan 9  
no.4:517-526 '60.

1. Magyar Tudományos Akadémia Talajtani és Agrokémiai Kutató  
Intézete, Budapest.

VARGA, Gyula; MATE, Ferenc; GRUBER, Lajos

Preparation of fertilizers labelled with radioactive isotopes. I.  
Agrokem talajtan 9 no.4:527-534 '60.

1. Magyar Tudományos Akademia Talajtani es Agrokemiai Kutato  
Intezete, Budapest.

L 17679-66

ACC NR: AT6009224

SOURCE CODE: HU/2502/65/043/002/0159/0160

AUTHOR: Szabolcs, Anna (Budapest); Gruber, Lajos (Budapest); Otros, Laszlo (Budapest)

ORG: Central Research Institute for Chemistry, Hungarian Academy of Sciences, Budapest

TITLE: Synthesis of 1,6-bis-(beta-chloroethyl- sup 14 C sub 1 - amino)-1,6-dihydrochloride (degranol- sup 14 C)

SOURCE: Academia scientiarum hungaricae. Acta chimica, v. 43, no. 2, 1965, 159-160

TOPIC TAGS: organic synthetic process, drug, carbon, tracer study, hydride, lithium, aluminum, chlorination, cyclic group

ABSTRACT: The synthesis of the drug Degranol (in the C-14 labeled form) was described. Glycine-1-<sup>14</sup>C ethyl ester was reduced with lithium aluminum hydride to 2-aminoethane-1-<sup>14</sup>C-1-ol, which was converted by chlorination with thionyl chloride into 2-chloroethylamine-<sup>14</sup>C. The latter compound was cyclized in the presence of NaOH to ethylene-<sup>14</sup>C<sub>1</sub>-imine, which was condensed with 1,2,5,6-dianhydro-3,4-isopropylidene-D-mannitol and the product hydrolyzed to yield <sup>14</sup>C-Degranol labeled on the C atom of the β-chloroethylamino group. [JPRS]

SUB CODE: 06, 07 / SUBM DATE: 22Sep64 / ORIG REF: 002 / OTH REF: 003

FW  
Card 1/1

ACC NR: AT6009222

SOURCE CODE: HU/1964/65/043/042/0449/0153

AUTHOR: Otvos, Laszlo--Etvesh, L. (Budapest); Gruber, Lajos (Budapest);  
Meisel-Agoston, Julia--Meysel-Agoshton, Yu. (Budapest)

ORG: Central Research Institute for Chemistry, Hungarian Academy of Sciences,  
Budapest

TITLE: Studies on the Meerwein-Ponndorf-Verley-Oppenauer reaction. Part 1:  
Investigation of the reaction mechanism with radiocarbon. Racemization of secondary  
alcohols

SOURCE: Academia scientiarum hungaricæ. Acta chimica, v. 43, no. 2, 1965, 149-153

TOPIC TAGS: carbon, acetone, alcohol, tracer study, aluminum compound

ABSTRACT: Using C-14 labeled acetone and non-labeled aluminum isopropylate it was shown that the Meerwein-Oppensauer reaction takes place in systems having no oxidation-reduction potential differences resulting in an exchange the completion of which depends on the molar ratios only. According to this finding, a possibility was presented for the racemization of optically active secondary alcohols. The mechanisms of the above reactions were explained. Orig. art. has: 1 figure and 1 table. [JPRS]

SUB CODE: 07 / SUBM DATE: 22Sep64 / OTH REF: 012

Card 1/1

GRUBER, L. O.

Tiagovye podstantsii. [Traction substations]. Moskva, Gos. transp. zhel-dor. izd-vo, 1948. 379p. illus., diags.

DLC: TF863.G75

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

GRUBER, L. O.

USSR/Engineering  
Railroads, Electric  
Power Transmission, Electric

Jan 48

"On S. M. Serdinov's Article, 'The Problem of Long-Distance Power Supply for Electrical Railroads'" 3 pp

"Elektrichestvo" No 1

Problem presented in original article is of great importance. Here suggestions are offered by M. A. Shatelen, Corr Mem, Acad Sci; Prof V. V. Bolotov, Leningrad Polytech Inst imeni Kalinin; I. I. Ivanov, Cand Tech Sci, Gen Sec, Power Eng Econ, Ministry of Means of Communication USSR; L. O. Gruber, Engr, Transtekhnproyekt, Ministry of Means of Communication USSR; A. N. Sarkisov, Engr, Baku.

PA 4/49TH9

GRUBER, Leonid Osipovich; PERTSOVSKIY, Lazar' Moiseyevich; TROFIMOV, Valentin Ivanovich; LAPIN, V.B., inzhener, redaktor; VERINA, G.P., tekhnicheskiy redaktor

[Design, operation and repair of electric railroad substations]  
Ustroistvo, ekspluatatsiia i remont tiagovykh podstantsii. Moskva,  
Gos. transp. zhel-dor. izd-vo, 1954. 466 p. [Microfilm] (MLRA 8:3)  
(Electric railroads--Substations)

BRNESHEVICH, I.I., kandidat tekhnicheskikh nauk; BOGIN, N.M., kandidat tekhnicheskikh nauk; BYKOV, Ye.I., inzhener; VLASOV, I.I., kandidat tekhnicheskikh nauk; GRITSEVSKIY, M.Ye., inzhener; GRUBER, I.O., inzhener; GURVICH, V.G., inzhener; DAVYDOV, V.N., inzhener; YER-SHOV, I.M., kandidat tekhnicheskikh nauk; ZASORIN, S.N., kandidat tekhnicheskikh nauk; IVANOV, I.I., kandidat tekhnicheskikh nauk; KRAUKLIS, A.A., inzhener; KROTOV, L.B., inzhener; LAPIN, V.B., inzhener; LASTOVSKIY, V.P., dotsent; LAPUNIN, N.I., inzhener; MARKVANDT, K.G., professor, doktor tekhnicheskikh nauk; MAKHAYLOV, M.I., professor, doktor tekhnicheskikh nauk; NIKANOROV, V.A., inzhener; OSKOLKOV, E.M., inzhener; OKHOSHIN, L.I., inzhener; PAFENOV, K.A., dotsent, kandidat tekhnicheskikh nauk; PERTSOVSKIY, L.M., inzhener; POPOV, I.P., inzhener; PORSHNEV, B.G., inzhener; RATHER, M.P., inzhener; ROSSIYEVSKIY, G.I., dotsent, kandidat tekhnicheskikh nauk; RYKOV, I.I., kandidat tekhnicheskikh nauk; RYSHKOVSKIY, I.Ya., dotsent, kandidat tekhnicheskikh nauk; RYABKOV, A.Ya., professor [deceased]; TAGER, S.A., kandidat tekhnicheskikh nauk; KHAZEN, M.M., professor, doktor tekhnicheskikh nauk; CHERNYSHOV, M.A., doktor tekhnicheskikh nauk; EDIN, L.Ye., professor, doktor tekhnicheskikh nauk; YUGENOV, B.N., dotsent; AKSENOV, I.Ya., dotsent, kandidat tekhnicheskikh nauk; ARKANGELSKIY, A.S., inzhener; BARTENEV, P.V., professor, doktor tekhnicheskikh nauk; BERNGARD, K.A., kandidat tekhnicheskikh nauk; BOROVY, M.Ye., dotsent, kandidat tekhnicheskikh nauk; BOGDANOV, L.A., inzhener; BOGDANOV, N.K., kandidat tekhnicheskikh nauk; VINNICHENKO, N.G., dotsent, kandidat ekonomicheskikh nauk;

(Continued on next card)

BENESHEVICH, I.I.----(continued) Card 2.

VASIL'YEV, V.P.; GONCHAROV, N.G., inzhener; DERIBAS, A.T., inzhener;  
 DOBROSEL'SKIY, K.M., dotsent, kandidat tekhnicheskikh nauk; DLUGACH,  
 B.A., kandidat tekhnicheskikh nauk; YEFIMOV, G.P., kandidat tekhnicheskikh nauk;  
 ZEMBLINOV, S.V., professor, doktor tekhnicheskikh nauk; ZABZALO, H.L., kandidat tekhnicheskikh nauk; IL'IN, K.P., kandidat tekhnicheskikh nauk; KARZHENIKOV, A.D., kandidat tekhnicheskikh nauk; KAPLUN, Z.Sh., inzhener; KANSHIN, M.D.; KOCHNEV, P.P., professor, doktor tekhnicheskikh nauk; KOGAN, L.A., kandidat tekhnicheskikh nauk; KUCHORIN, S.F., inzhener; LEVASHOV, A.D., inzhener; MAKSIMOVICH, B.M., dotsent, kandidat tekhnicheskikh nauk; MARTYNOV, M.S., inzhener; MEDEL', G.M., inzhener; NIKITIN, V.D., professor, kandidat tekhnicheskikh nauk; PADNYA, V.A., inzhener; PANTELEYEV, P.I., kandidat tekhnicheskikh nauk; PSTNOV, A.P., professor, doktor tekhnicheskikh nauk; POVOROZHENKO, V.V., professor, doktor tekhnicheskikh nauk; PISKAREV, I.I., dotsent, kandidat tekhnicheskikh nauk; SERGHEYEV, Ye.S., kandidat tekhnicheskikh nauk; SIMONOV, K.S., kandidat tekhnicheskikh nauk; SIMANOVSKIY, M.A., inzhener; SUYAZOV, I.G., inzhener; TALDAYEV, F.Ya., inzhener; TIMONOV, K.K., kandidat tekhnicheskikh nauk; USILAKOV, H.Ya., inzhener; USFENSKIY, V.K., inzhener; FEL'DMAN, E.D., kandidat tekhnicheskikh nauk; PERAPONTOV, G.V., inzhener; KHOKHLOV, L.P., inzhener; CHERNOMORDIK, G.I., professor, doktor tekhnicheskikh nauk; SHAMAYEV, M.P., inzhener; SHAPIRKIN, B.I., inzhener; YAKUSHIN, S.I., inzhener; GRANOVSKIY, P.G., redaktor; TISHCHENKO, A.I., redaktor; ISAYEV, I.P., dotsent, kandidat tekhnicheskikh nauk, redaktor; KLIHOV, V.P., dotsent kandidat tekhnicheskikh  
 (Continued on next card)

BENESHEVICH, I.I.--- (continued) Card 3.

nauk, redaktor; KARLOV, N.V., inzhener, redaktor; KALININ, V.K.,  
inzhener, redaktor; STEPANOV, V.K., professor, redaktor; SIDOROV, N.I.,  
inzhener, redaktor; GIRONIMUS, B.Ye., kandidat tekhnicheskikh nauk,  
redaktor; ROBEL', N.I., otvetstvennyy redaktor

[Technical reference manual for railroad engineers] Tekhnicheskii  
spravochnik zheleznodorozhaika. Moskva, Gos. transp.zhel-dor. izd-vo.  
Vol.10. [Electric power supply for railroads] Energosnabzhenie zhelez-  
nykh dorog. Otv.red. tema K.G.Markvardt. 1956. 1080 p. Vol.13.  
[Operation of railroads] Eksploatatsiia zheleznnykh dorog. Otv. red.  
tema R.I.Robel'. 1956. 739 p. (MLRA 10:2)

1. Chlen-korrespondent Akademii nauk SSSR (for Petrov)  
(Electric railroads) (Railroads---Management)

GRUBER, L.O., inzhener.

Improve the planning of railroad electrification. Transp. stral.  
6 no.7:8-10 J1 '56. (MLRA 9:10)  
(Railroads--Electrification)

RUBER, Leonid Osipovich; PERTSOVSKIY, Iazar' Moiseyevich; TROFIMOV,  
Valentin Ivanovich; PRUDYUS, A.S., inzhener, redaktor; SIDOROV,  
N.I., inzhener, redaktor; KHITROV, P.A., tekhnicheskii redaktor

[Installation, operation and repair of electric traction substations]  
Ustroistvo, ekspluatatsiia i remont tiagovykh podstantsii. Izd.2-oe,  
dop. i ispr. Moskva, Gos.transp.zhel-dor.izd-vo, 1957. 465 p.  
(Electric railroads--Substations) (MLRA 10:9)

GRUBER, L.O.

Railroad electrification. Transp.stroi. 7 no.10:12-17 0 '57.

(MIRA 10:12)

1. Glavnyy inzhener Glavtansselektromontazha.

(Railroads--Electrification)

GRUPP, L.O.

Speeding up the electrification of railroads. Transp. stroi. 8  
no. 6:1-2 Je '58. (MIRA 11:7)

1. Glavnyy inzhener Glavtransielektromontazha.  
(Electric railroads--Construction)

GRUBER, L.O.

Electrification projects. Transp. stroi. 9 no.11:8-11 N '59 (MIRA 13:3)

1. Glavnyy inzhener Glavtransselektromontazha.  
(Electric railroads)

GRUBER, L.O.

Let's fulfill the plan for the electrification of railroads ahead  
of time. Transp.stroi. 10 no.7: J1 '60.

(MIRA 13:7)

1. Glavnyy inzhener Glavtransselektromontazha.  
(Railroads--Electrification)

<sup>3K</sup>  
GUBER, Leonid Osipovich; PERTSOVSKIY, Lazar' Moiseyevich; TROFIMOV,  
Valentin Ivanovich; PROKHORSKIY, A.A., inzh., retsenzent;  
BELYAYEV, I.A., inzh., red.; MEDVEDEVA, M.A., tekhn. red.

[Layout, installation, and use of traction substations]  
Ustroistvo, montazh i ekspluatatsiia tiagovykh podstantsii.  
Izd.3., perer. i dop. Moskva, Transzheldorizdat, 1962.  
519 p. (MIRA 15:9)

(Electric railroads--Substations)

GRUBER, L.O., inzh.

Electrification of the railroads of Great Britain. Transp. stroi. 12  
no.2:54-58 F '62. (MIRA 15:7)  
(Great Britain--Railroads--Electrification)

GRUBER, Leonid Osipovich, inzh.; ZASORIN, Sergey Nikolayevich,  
kand. tekhn. nauk, dots.; PERTSOVSKIY, Lazar' Moiseyevich,  
inzh.; AYBASHEVA, T.V., red.

[Electric power plants and traction substations] Elektri-  
cheskie stantsii i tiagovye podstantsii. Moskva, Transport,  
1964. 423 p. (MIRA 17:12)

GRUBER, L.O.

At the forefront of technological reconstruction. Transp. stroi.  
14 no.9:4-6 S '64 (MIRA 18:1)

1. Glavnyy inzhener Glavnogo upravleniya po elektrifikatsii  
zheleznnykh dorog Ministerstva transportnogo stroitel'stva  
SSSR.

GRULER, I. V.

21031 Gruler, I. V. Nekotoryy dannyye o lechenii Rubtsovo-troficheskikh yazv  
operativnymi metodami po materialam Kliniki vosstanovitel'noy Khirurgii Trudy In-ta  
(Kazansk Nauch-issled in-t ortopedii i vosstanovit Khirurgii) t.111,1949, s. 82-88.

SO: LETOIS JHURNAL STATEY - Vol. 28, Moskva, 1949

GRUBER, L.V., kandidat meditsinskikh nauk

Conservative therapy of old dislocations of the shoulder. Ortop.  
travm. i protez. no.4:17-20 J1-Ag '55 (MLRA 8:10)

1. Iz Kazanskogo nauchno-issledovatel'skogo instituta ortopedii  
i vosstanovitel'noy khirurgii (dir.-zasluzhennyy deyatel' nauki  
TASSR, prof. L.I.Shulutko)

(SHOULDER, dislocations,

ther., conservative fixation of old disloc.)

(DISLOCATIONS

shoulder, conservative fixation of old disloc.)

GRUBER, I.V., kand.med.nauk

Cancer appearing on the site of trophic ulcers and fistulas. Kaz.med.  
zhur. 40 no.4:82-84 JI-Ag '59. (MIRA 13:2)

1. Iz Kazanskogo nauchno-issledovatel'skogo instituta travmatologii  
i ortopedii (direktor - prof. L.I. Shulutko).  
(ULCERS) (FISTULA) (CANCER)

GRUBER, L.V., kand.med.nauk (Kazan', ul. Lobachevskogo, d.10,kv.17)

Reconstruction of the "digits" of the upper extremity. Vest.  
khir. 70 no.6:98-102 Je'63 (MIRA 16:12)

1. Iz Kazanskogo nauchno-issledovatel'skogo instituta trav-  
matologii i ortopedii (dir. - kand.med.nauk U.Ia.Bogdanovich).

urologiya, 1964, kand. med. nauk

Surgical treatment of cicatricial contractures of the large joints. Khirurgiya 40 no.5:123-129 My '64. (MIRA 18:2)

1. Kazanskiy nauchno-issledovatel'skiy institut travmatologii i ortopedii (dir.- kand. med. nauk V.Ya. Bogdanovich).

GRUBER, M.

Preparing storage batteries for the winter. Avt.transp.32 no.10:  
35 0 '54. (MLRA 7:12)  
(Automobiles--Batteries)

GRUBIN, V.

Zibin, IU.; Sinaiuk, D. Extending the life of shoes by creating new lasts. In.  
from the Russian. p. 22.

LEKA PUBLISHERS, Sofiya, Vol. 4, no. 1, 1955.

SO: Monthly List of East European Accessions, (ASAL), LC, Vol. 4, no. 10, Oct. 1955,  
Encl.

GRUBER, S.H., inz.

Development of the forced convention drying in the paper industry. Papir a celuloza 17 no.2:34-39 F '62.

1. Spooner Dryer and Engineering Ltd., England.

GOSZTONYI, Sandor; LEHR, Ferenc, a muszaki tudomanyok kandidatusa;  
FICHTNER, Kurt; MARECKI, Jacek, prof., dipl. ing. (Lengyelország);  
WRESNIOWSKI, Romuald; BURSZTYNSKI, Janusz; HUBNER, Ewald;  
KIEFER, Erich; BOIE, Werner, prof., dr. ing. (Nemot Demokrati-  
kus Koztarsasag); BOSNIC, Cedomir (Jugoszlavia); ZILBER,  
Aleksander (Lengyelország); GRUBER, S.M. (Anglia); STANCESZKU,  
Ian, prof. (Romania); BONKALO, Tamas, dr.; ENDRENYI, Sandor;  
KATONA, Kalman; KOHARY, Lajos

Rationalization in power utilization in the field of the light  
industry. Ipari energia 3 no.1/2;32-38 Ja-F '62.

1. Konnyuipari Miniszterium helyettes foosztalyvezetoje (for  
Gosztonyi). 2. Konnyuipari Tervezo Iroda (for Lehr). 3. Textili-  
pari Kutato Intezet (for Bonkalo). 4. Papiripari Kutato Intezet  
(for Endrenyi).

L 15604-63

EPF(c)/EWP(1)/EWT(m)/BDS ASD

FC-4/Pr-4

RM/WW

ACCESSION NR: AP3004704

3/0190/63/005/008/1183/1189

AUTHORS: Kogan, E. V.; Ivanova, A. G.; Reykhsfel'd, V. O.; Smirnov, N. I.; Gruber, V. N. 67 66

TITLE: Polymerization of octamethylcyclotetrasiloxane in the presence of acid catalysts

SOURCE: Vyssokomolekulyarnyye soyedineniya, v. 5, no. 8, 1963, 1183-1189

TOPIC TAGS: siloxane, polymerization, catalyst, sulfuric acid, potassium dichromate, potassium permanganate

ABSTRACT: The kinetics of octamethylcyclotetrasiloxane (OMCTS) polymerization by sulfuric acid in the presence of promoters was investigated by the conventional viscosimetric method and by an ultrasonic technique described in an earlier paper by E. V. Kogan, N. I. Smirnov, and A. P. Mozhayev (Zh. prikl. khimii, 34, 541, 1961). Into a 50-ml flask were placed 25 ml of OMCTS to which were added (under stirring) various amounts of sulfuric acid, potassium permanganate, or potassium dichromate solutions. It was found that the stirring frequency had no effect on the process. In the absence of oxidizers, 2% by weight of concentrated sulfuric

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ACCESSION NR: AP3004704

acid resulted within a 6-8 hour interval in a maximum polymerization level (up to 90%) of the original OMCTS. Additional amounts of sulfuric acid increased only the conversion rate. Experiments showed that the dilution of the acid had a detrimental effect on the rate and yield of polymerization, as did the replacement of the sulfuric acid by oleum. A similar detrimental effect was observed when 0.03-1.6 gram-equivalent of potassium permanganate or 0.1-1.0 gram-equivalent of potassium dichromate was added per gram-equivalent of sulfuric acid, the degree of polymerization inhibition increasing with the amount of oxidant added. It was found that at 60C (in the presence of 1% concentrated sulfuric acid without oxidants) a polymerization level of 80% was reached within 4 hours, while at 20C it took 9 hours to achieve a 30% polymerization. Orig. art. has: 1 formula and 9 charts.

ASSOCIATION: Leningradskiy technologicheskii institut im. Lenseveta (Leningrad Technological Institute)

SUBMITTED: 19Jan62

DATE ACQ: 28Aug63

ENCL: 00

SUB CODE: CH

NO REF SOV: 010

OTHER: 004

Card 2/2

GRUBER, V.N.; MUKHINA, L.S.

Mechanism of catalytic polymerization of cyclic dimethylpolysiloxanes. Vysokom.sped. 1 no.8:1194-1199 Ag '59.  
(MIRA 13:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka.

(Polymerization) (Siloxanes)

S/190/61/003/001/012/020  
B119/B216

AUTHORS: Gruber, V. N., Mukhina, L. S.

TITLE: Mechanism of catalytic polymerization of cyclic dimethyl polysiloxanes. II.

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 1, 1961, 84-87

TEXT: In their previous publication (Ref. 1) the authors were able to show that the catalytic polymerization of cyclic dimethyl polysiloxanes (up to a resinous consistency) is based on redox reactions in the catalyst system (catalyst: concentrated  $H_2SO_4$ ,  $FeCl_3$ ). The present work studies the effect of small quantities of salts and metals with variable valency ( $CuSO_4$ ,  $MnSO_4$ ,  $FeSO_4$ ,  $Fe_2(SO_4)_3$ ,  $KMnO_4$ ) as well as glycerol and ethyl alcohol on the rate of polymerization in presence of concentrated  $H_2SO_4$  and  $Al_2(SO_4)_3 \cdot 2H_2O$  as catalysts. 0.01 g of each of the above-mentioned salts was added to 150 g portions of the initial silicone oil. The reaction mixtures contained 2% catalyst (relative to silicone oil). The experiments showed that the

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Mechanism of catalytic polymerization...

S/190/61/003/001/012/020  
B119/B216

reaction rate is increased 2 - 3 fold by the presence of these compounds. This enables polymerization on  $\text{Al}_2(\text{SO}_4)_3 \cdot 2\text{H}_2\text{O}$  plus a slight amount of concentrated  $\text{H}_2\text{SO}_4$  at room temperature instead of the usually required temperature of 90 - 100°C. Glycerol and ethyl alcohol reduce the reaction rate. Polymerization tests in narrow glass vessels (2.5 cm in diameter and 20 cm high) in presence of  $\text{FeCl}_3$ ,  $\text{Al}_2(\text{SO}_4)_3 \cdot 2\text{H}_2\text{O}$  concentrated  $\text{H}_2\text{SO}_4$  yielded no rubbery products, since polymerization was suppressed by the walls of the vessel. These findings indicate that the redox process (interaction between the lower-oxide, oxide and peroxide forms of the catalyst) underlying the polymerization of cyclic dimethyl polysiloxanes is a chain reaction. The authors thank V. N. Kartsev, M. M. Fomicheva, L. I. Shebalina and M. I. Vinnikovskaya for assisting in the experiments. Mention is made, among others, of a publication by N. N. Semenov. There are 2 tables and 6 references: 10 Soviet-bloc and 1 non-Soviet-bloc.

SUBMITTED: June 7, 1960

Card 2/2

S/190/61/003/001/013/020  
B119/B216

AUTHORS: Gruber, V. N., Nel'son, K. V., Kozlova, N. V., Mikhaylova, T.A.,  
Mukhina, L. S.

TITLE: Mechanism of catalytic polymerization of cyclic dimethyl  
polysiloxanes. III

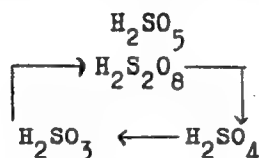
PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 1, 1961, 89-92

TEXT: In previous studies on this subject (Refs. 1,2) the authors were able to show that the polymerization of cyclic dimethyl poly siloxanes by the catalytic action of  $\text{FeCl}_3$ ,  $\text{Al}(\text{SO}_4)_3 \cdot 2\text{H}_2\text{O} + \text{H}_2\text{SO}_4$  or concentrated  $\text{H}_2\text{SO}_4$  leading to resinous products is due to redox reactions which cause the formation of active centers at which chain-formation takes place. The following redox scheme was suggested for  $\text{H}_2\text{SO}_4$  catalysis:

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Mechanism of catalytic polymerization...

S/190/61/003/001/013/020  
B119/B216



The present work deals with the quantitative evaluation of the redox processes occurring during polymerization by  $\text{H}_2\text{SO}_4$ . The amount of catalyst used for the polymerization tests corresponded to 2% of the silicone oil portion. Samples were drawn at intervals in the course of the reaction and analyzed quantitatively for  $\text{H}_2\text{SO}_3$  (iodometrically, (Ref. 3)) and  $\text{H}_2\text{SO}_5$  (by the method described by L. I. Kashtanov, O. N. Oleshchuk (Ref. 4)), and infrared-spectrographed (in the MK-11 (IKS-11) infrared spectrometer) to determine the quantitative relation between cyclic and linear polymer (the former has an intensive band at  $1090 \text{ cm}^{-1}$  and the latter peaks at  $1025$  and  $1110 \text{ cm}^{-1}$ ). The peak at  $1025 \text{ cm}^{-1}$  characteristic of linear polysiloxanes

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Mechanism of catalytic polymerization...

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B119/B216

increases in the course of the reaction, while the peak at  $1090\text{ cm}^{-1}$  corresponding to the cyclic form becomes weaker and shifts to  $1110\text{ cm}^{-1}$ . The findings signify the simultaneous presence of the lower-oxide and peroxide form of the catalyst in the reaction mixture to be due to redox processes involving constant regeneration of these forms. The decrease of  $\text{H}_2\text{SO}_3$  content and simultaneous increase of  $\text{H}_2\text{SO}_5$  content during the reaction process indicate the occurrence of macro stages according to N. M. Emanuel' (Ref. 5). The  $\text{H}_2\text{SO}_5$  content in the reaction mixture is directly proportional to the formation of linear polymer. There are 2 figures and 7 references: 5 Soviet-bloc and 2 non-Soviet-bloc.

SUBMITTED: June 7, 1960

Card 3/3

S/190/61/003/002002/012  
B130/B202

AUTHORS: Gruber, V. N., Mukhina, L. S.

TITLE: Mechanism of catalytic polymerization of cyclic dimethyl polysiloxanes. IV

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 2, 1961, 174-176

TEXT: Polymerization of cyclic dimethyl polysiloxanes (silicone oil) in the presence of the known redox system  $2\text{KMnO}_4 + 3\text{H}_2\text{SO}_4 = 2\text{MnSO}_4 + \text{K}_2\text{SO}_4 + 3\text{H}_2\text{O} + 5\text{O}_2$  as catalyst, confirms the assumption that this polymerization is the result of the redox reaction. Silicone oil was filled into a flask provided with a stirrer. Subsequently,  $\text{KMnO}_4$  and  $\text{H}_2\text{SO}_4$  were added: 3.22 g  $\text{KMnO}_4$  and 3 g  $\text{H}_2\text{SO}_4$  per 150 g silicone oil. The weakly pink color indicated the presence of  $\text{Mn}^{++}$ , while the finely disperse brown mass is indicative of the formation of  $\text{MnO}_2$ . The rubber-like specimens were obtained after 1-2 hr at room temperature; no further time was necessary for ripening (Table). If  $\text{Al}_2(\text{SO}_4)_3$  is applied as catalyst, 70 hr are necessary for the ripening. The specimens of the siloxane rubber, Card 1/3 ✓

Mechanism of catalytic ...

S/190/61/003/002/002/012  
B130/B202

obtained have the properties of elastomers. The authors thank V. N. Kartsev, M. M. Fomicheva, and L. I. Shebalina for their assistance. There are 1 table and 5 Soviet-bloc references.

SUBMITTED: June 7, 1960

Legend to Table: 1) molecular weight; 2) content of volatile substances; 3) breaking strength, kg/cm<sup>2</sup>; 4) relative elongation; 5) residual elongation; 6) coefficient of frost resistance at -55°C; 7) after thermal aging (72 hr at 200°C); a) relative elongation; b) residual elongation; c) breaking strength; 8) duration of polymerization, hr. The standard values are given in parentheses.

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Mechanism of catalytic ...

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Мол. вес. (400—700 000)	Содержание лету- чих, % (< 7)	Сопротивление раз- рыву, кг/см² (> 38)	Относительное удли- нение, % (> 25)	Остаточное удлине- ние, % (< 4)	Коэффициент моро- зостойкости при -45° (> 0.5)	После теплового старения (72 часа при 200°)			Продолжительность полимеризации, часы
						относи- тельное удлине- ние, % (> 180)	остаточное удлине- ние, %	сопротив- ление разрыву, кг/см² (> 38)	
723 000	4,20	42	270	2	0,76 и 0,11 при -60°	210	0	42	1,25
699 000	2,50	48	280	2	0,79 и 0,32 при -60°	233	2	44	1,5
318 000	2,80	43	245	2	0,79 и 0,22 при -60°	223	2	45	2,0
689 000	4,86	45	285	2	0,76	230	2	46	2,0
803 000	4,48	43	250	2	0,77	210	2	41	2,0
742 000	5,20	41	230	2	0,74	210	0	47	1,17
567 000	4,42	43	215	2	0,75	200	2	45	1,17
669 000	4,60	41	215	2	0,80	200	2	48	1,17

Card 3/3

GRUBER, V.N.; PANCHENKO, B.I.; MUKHINA, L.S.; MIKHAYLOVA, T.A.

Synthesis of a dimethylsiloxane elastomer by the hydrolytic  
condensation method. Vysokom.sped. 4 no.7:1042-1048 J1 '62.

(MIRA 15:7)

1. Nauchno-issledovatel'skiy institut sinteticheskogo kauchuka  
imeni S.V. Lebedeva.

(Silicon organic compounds)

(Rubber, Synthetic)

KOGAN, E.V.; IVANOVA, A.G.; REYKHSFEL'D, V.O.; SMIRNOV, N.I.; GRUBER, V.N.

Polymerization of octamethylcyclotetrasiloxane under the effect of  
acid catalysts. Vysokom.sqed. 5 no.8:1183-1189 Ag '63.  
(MIRA 16:9)

1. Leningradskiy tekhnologicheskii institut imeni Lensovet.  
(Silicon organic compounds) (Polymerization) (Catalysts)

GRUBER, V.N.; KILIMANSKIY, A.L.; PRATEVA, T.G.; RUMYANTSEV, A.I.;  
MIKHAYLOVA, T.A.; KOZ'MINA, Ye.V.

Effect of supermolecular structure on the thermal stability  
of siloxane elastomers. Vysokom. soed. 7 no.3:462-467 Mr '65.  
(MIRA 18:7)

1. Nauchno-issledovatel'skiy institut sinteticheskogo kauchuka  
i Institut rezinovoy promyshlennosti.

L 52703-65 EWG(j)/EWT(m)/EPF(c)/ENR/EWP(j)/ETA(h)/EWA(l) Pc-4/Pr-4/PB-4  
 Feb WW/RM  
 ACCESSION NR: AP5013731 UR/0138/65/000/005/0001/0006  
 678.84:678.01:536.495

AUTHOR: Degteva, T. G.; Gruber V. N.; Kuz'minskiy, A. S.

TITLE: Behavior of various silicone rubbers<sup>15</sup> and their vulcanizates  
 in vacuum at 250—500C

SOURCE: Kauchuk i rezina, no. 5, 1965, 1-6

TOPIC TAGS: silicone rubber, silicone rubber mix, silicone rubber  
 vulcanizate, heterosiloxane rubber

ABSTRACT: An attempt has been made to solve the important problem  
 of improving the thermal stability of silicone rubbers by developing  
 new types of polymers in which part of the backbone Si atoms is  
 replaced by such atoms as B, P, Ti or V. For this purpose a compara-  
 tive study was made of the thermal stability of various silicone  
 rubbers and their vulcanizates. The experiments were conducted with  
 methylvinylsiloxane (SKTV) and methylphenylsiloxane (SKTFV) rubbers,  
 and elastomers having atoms of Ti (GSTi), B and P (GSBPV).<sup>15</sup>

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L 52703-05  
ACCESSION NR: AP5013731

V (GSV), or B, P and Ti (GSBPTi) in the backbone. The rubbers were prepared and vulcanized by various methods, including irradiation, and were investigated both unfilled and loaded with various fillers. The relative thermal stability of the rubbers, rubber mixes and vulcanizates was estimated from the weight loss of specimens on heating for 2 hr in vacuum at 250—500C. It was shown that: 1) polymers with Ti or B and P atoms in the backbone (Fig. 1 of the Enclosure) exhibit the highest thermal stability; 2) rubber mixes filled with  $TiO_2$  or  $Fe_2O_3$  have the highest thermal stability; 3) peroxide and irradiation vulcanizates loaded with identical fillers exhibit a very close thermal stability; 4) heating of rubber mixes and vulcanizates in vacuum at 250—500C increases the thermal stability of the rubber as a result of the stabilizing effect of the fillers; 5) vulcanizates which give off the same amounts of volatile products on heating in vacuum can considerably differ in the rate of chemical stress relaxation, a fact stressed in view of the use of silicone rubbers as sealants; 6) irradiation vulcanizates of silicone rubbers with Ti or B and P atoms in the backbone, heated in vacuum in the stressed state, present no advantages over SKTV vulcanizates either

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L 52703-65.

ACCESSION NR: AP5013731

in respect to retaining of stresses or to the amount of evolving  
volatile products. Orig. art. has: 1 figure. [B0]

ASSOCIATION: Nauchno-issledovatel'skiy institut razinovoy promyshlen-  
nosti (Scientific Research Institute of Rubber Industry)

SUBMITTED: 00

ENCL: 01

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NO REF SOV: 005

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Card 3/4

L 52703-65

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ENCLOSURE: 01

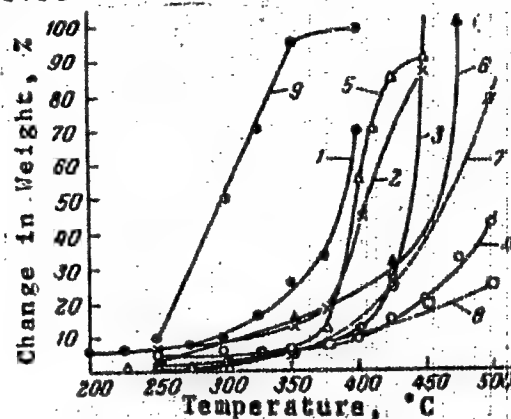


Fig. 1. Relative thermal stability of various silicone rubbers in vacuum:

1 - SKTV, acid-catalized, nonpurified; 2 - SKTFV; 3 - SKTV, without catalyst; 4 - GSBRV; 5 - SKTV, acid-catalyzed, purified; 6 - GSV; 7 - GSBRTi; 8 - GSTi; 9 - SKTV, alkali-catalized, nonpurified.

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L 54859-65

ENT(m)/EPF(c)/ENP(j) PC-4/Pr-4 RM

ACCESSION NR: AP5016515

UR/0190/65/007/006/1122/1123  
541.66

AUTHOR: Gruher, V. N.; Klebanskiy, A. L.; Degteva, T. G.; Matseyun, T. A.; Kruglova, G. A.; Kuz'mina, Ye. V. 3/15 B

TITLE: Improving the heat resistance of silicone elastomers by the introduction of orienting additives

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 6, 1965, 1122-1123

TOPIC TAGS: silicone elastomer, orienting additive, dimethylsiloxane rubber, heat resistant polymer

ABSTRACT: The heat resistance of dimethylsiloxane rubber (BKTV) has been increased from 250 to 350—400C by the introduction of orienting additives such as [unspecified] oxides, finely divided metals, or naturally occurring polymers. It is assumed that the mechanism of action of these additives is associated with their capacity to form coordination and polar links between polymer chains. These links cause the formation of oriented polymer sections, thus increasing the heat resistance of the material. The elastomers were prepared by hydrolytic polycondensation. Orig. art. has: 1 figure. [BO]

Card 1/2

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ACCESSION NR: AP5016515

ASSOCIATION: none

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NO REF SOV: 001

ENCL: 00

OTHER: 000

SUB CODE: MT,OC

ATD PRESS: 4031

Card

2/2

GRUBER, V.N.; KLEBANOV, A.I.; DESTEVA, T.G.; MATVEYEV, V.A.; LEVINA, G.A.;  
KUZ'MINA, Ye.V.

Increasing the heat resistance of siloxane elastomers by the  
introduction of orienting agents. Vysokom. grad. 7 no.6:1122-  
1123 Je '65. (MIRA 18.9)

DEGTSEV, T.G.; SHUMAK, V.N.; POPOV, A.S.

Study of the behavior of various silicate raw rubbers and rubbers  
on their base in a vacuum at temperatures ranging from 450°C to 500°C.  
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1. Nauchno-issledovatel'skiy institut rezhimov y proizvodstva.

"Heart and Vascular Diseases Treated with Carbonic Acid Anhydride",  
(11.100111 KODON, Vol. 11, No. 2/3, July/Aug. 1964, Budapest, Hungary)

SC: Monthly List of East European Accessions (HALL, 11, Vol. 1, No. 1,  
March 1965, Urel.

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Experience in the Operation of Control and Automation  
Instruments on the Furnaces of a Wheel Rolling Shop. L. G.  
Gauberman and A. M. Antsiev. (Mosk. 1948, (12), 101-  
103). (In Russian). Details are given of the wheel shop  
furnaces at Noye-Digil and of their instrumentation and  
control arrangements. Various advantageous modifications  
are described. —A. K.

GRUBEROVA, J.; KOPERDANOVA, E.; PLESKOVA, A.

Toxicological properties of some mixtures of dithiophosphoric acid esters. Prac. lek. 13 no.8/9:410-414 N '61.

1. Ustav hygieny prace a chorob z povolania v Bratislave, riaditel MUDr. I. Klucik.

(INSECTICIDES toxicol)

KLUCIK, I.; KEMKA, R.; GRUBEROVA, J.

Some findings on the effect and metabolism of fural. Prac. lek. 13  
no.8/9:455-461 N '61.

1. Ustav hygieny prace a chorob z povolania v Bratislave.

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KLUCIK, I.; JUCK, A.; GRUBEROVA, J.

Respiratory and pulmonary lesions caused by antimony trioxide dust.  
Pracovní lek. 14 no.8:363-368 0 '62.

1. Ústav hygieny práce a chorob z povolania v Bratislave, riaditeľ  
MUDr. I. Klucik.

(ANTIMONY)	(DUST)	(RHINITIS)	(PHARYNGITIS)
(PNEUMOCONIOSIS)	(PULMONARY EMPHYSEMA)	(OCCUPATIONAL DISEASES)	

BOZIK, L.; GRUBENOVA, J.; KOLECARI, D.; SZAK, O.

The health conditions of workers exposed to one centimeter and meter waves. Bratisl. lek. listy 45 no.4:225-232 31 Ag '65.

1. Klinika chorob z povolania Lekarske fakulty Univerzity Komenskeho v Bratislave (veduci prof. MUDr. M. Nosal), Ustav hygieny prace a chorob z povolania v Bratislave (riaditel prof. MUDr. M. Nosal) a Klinika ocných chorob Lekarske fakulty Univerzity Komenskeho v Bratislave (veduci prof. MUDr. J. Suster).

GRUBEROVA, Zdenka

"Repeating secondary school mathematics" by T. Gal, A. Kuzaryt.  
Reviewed by Zdenka Gruberova. Pokroky mat fyz astr 9 no.4:1953  
164.

GRUBERSKI, V.

Pre-critical region of liquids. I. Optical methods of investigation. W. Swietoslowski and L. Gutthard. II. V. Swietoslowski, I. Gruberski, and S. Wolosiecki. III. Microphotometric method. W. Swietoslowski and H. Markowicz. IV. Isochores and isotherms of post-critical region of  $n$ -butane. W. Swietoslowski and S. Wolosiecki (*Repts. Chem.*, 1982, 24, 198-201, 202-203, 207-213, 214-220). I. An optical method for observation of liquid-vapour phase boundaries in the critical region shows that obliteration of the meniscus with rising temp. is gradual, the meniscus persisting at the walls of a tube after it has ceased to exist at the center. II. Equalization of  $d$  in the upper and lower parts of a sealed tube partly filled with liquid ( $C_2H_6$ ,  $CCl_4$ ,  $EtOH$ ,  $EtCl$ , or  $n-C_4H_{10}$ ) takes place at temp.  $\sim 3^\circ$  within that of disappearance of the meniscus. The phenomena in tubes containing air take place at temp.  $\sim 0.5^\circ$  in those containing only the vapour above the liquid phase. III. A microphotometric procedure for measuring the breadth of the shadow obtained by lateral illumination of a tube above and below the phase boundary of a contained liquid in the pre-critical region is described. IV. Apparatus for studying pressure, vol., and temp. of liquids in the pre-critical region is described, applying the procedures outlined above. The breadth of the shadow obtained in the pre-critical region, with vol. constant and pressure and temp. variable is a linear function of  $d$ . R. TRUSCING

# CZECH

(The methods of determining naphthalene in coal-tar oil.  
T. Gruberski, *Przemysl Chem.* 9, 330-8(1953). (English  
summary). The method consists of normal distn. of the  
coal-tar oil in the lab. column, collecting the fraction contg.  
C<sub>10</sub>H<sub>8</sub> (I), and detg. its m.p. A 500-g. sample was distd.,  
10-g. fractions were taken and frozen until no crystals of I  
were present (smaller fractions b. above 230°). All frac-  
tions contg. I were collected, weighed, the m.p. of a 5-ml.  
sample of the distillate detd., the amt. of I (%) in that  
sample read from a soly. table, and the amt. of I in the  
original sample in g. calcd. Lack of soly. data of I in oils  
for temp. below 0°, and presence of acidic components,  
which increase soly. of I are the disadvantages, while a short  
time of detn. and lack of foreign azeotropic entrainer are the  
advantages of this method. Gene A. Wozny

G. n. b. e. n. s. k. i. , T.

222. INVESTIGATION OF THE ACENAPHTHENE FRACTION. G. n. b. e. n. s. k. i. , T. 5  
 Zdzienicki, R. and Gruberski, T. (Przem. Chem. (Chem. Ind., Warsaw), 1954,  
 vol. 33, 165-166; Abstr. in Chem. Abstr., 1957, vol. 51, 2235). A simple  
 method for studying the course of distillation of the coal tar oils is  
 described. The method consists in measuring the temperatures of  
 disappearance of crystals of the samples collected during the distillation and  
 the same samples after recrystallization from methyl alcohol. The term "main  
 component of crystallization" is suggested for that component which  
 precipitates first from the polyeutectic mixture. The acenaphthene fraction  
 was examined by this method. The fraction in which the acenaphthene was the  
 main component of crystallization was isolated. C.A.

GRUBERSKI, T.

Poland/Chemical Technology - Chemical Products and Their Application. Treatment of Solid Mineral Fuels, I-12

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62537

Author: Gruberski, T.

Institution: None

Title: Absorbent Oil as a Source of Raw Materials for the Chemical Industry

Original

Periodical: Olej pluczkowy jako zdroj surowcow dla przemyslu chemicznego, Przem. chem., 1955, 11, No 11, 623-625; Polish; Russian and English resumes

Abstract: Results of investigations of the fraction of absorbent coal oil by the cryometric method, considered is the possibility of recovering from fractions of this oil of pure components: naphthalene, 2-methyl naphthalene, diphenyl, acenaphthene, diphenyl oxide, fluorene.

Card 1/1

POLAND / Chemical Technology. Chemical Products and H  
Their Applications. Chemical Processing of  
Solid Fossil Fuels.

Abs Jour: Ref Zhur-Khimiya, 1959, No 4, 13114.

Author : Gruberski, Tadeusz.

Inst : Not given.

Title : On the Use of a Distillation-Cryometer Method  
for Isolation Determination of Components of  
Absorbent Oil.

Orig Pub: Przem. chem., 1958, 37, No 5, 353-356.

Abstract: For the separation and determination of components  
of absorbent oil (AO) obtained from medium fractions  
of coal resin and having the character of a poly-  
eutectic mixture of about 55 organic compounds,  
the distillation-cryometer method is used. It is  
shown that this method is used for determination

Card 1/2

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CIA-RDP86-00513R000617110012-2"

POLAND / Chemical Technology. Chemical Products and  
Their Applications. Chemical Processing of  
Solid Fossil Fuels.

Abs Jour: Ref Zhur-Khimiya, 1959, No 4, 13114.

Abstract: of content of neutral, easily-congealing compon-  
ents of AO. -- Ya. Satunovskiy.

Card 2/2